



CLINICOPATHOLOGICAL CORRELATION OF BENIGN BREAST LESION; A TERTIARY CARE CENTRE STUDY

Pathology

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ABSTRACT

Introduction: - This study was done with aim to identified the burden of benign breast lesions and to identify the common lesions and correlate that with clinical findings.

Material and Methods: -This is a two-year (August 2016 to July 2018) prospective study of benign/nonmalignant lesions of breast, conducted in department of Pathology, Jawahar Lal Nehru Medical College, Ajmer Rajasthan.

Results: - Total 620 breast specimens received in study period, 461 (74.35%) were diagnosed as benign breast lesions including miscellaneous lesions. Fibroadenoma was the most common (67.03%) benign breast lesion. Breast lump was the most common presenting complaint. The mean age for Benign lesion was 29.07±10.767 years with a wide age range of 13-70 years, and a peak age occurrence in the third decade.

Conclusions: - Majority of cases having breast problems was breast lump and diagnosed to benign diseases. Fibroadenoma was most common lesion affecting mainly young females and gynecomastia in male.

KEYWORDS

Benign breast lesion, Clinicopathological, Fibroadenoma

INTRODUCTION

Breast lesions are showing a rising trend worldwide. Several studies have been carried out to ascertain the magnitude of the problem.^[1] The majority of the lesions that occur in the breast are benign.^[2-5] Benign breast lesion has a heterogeneous group of lesions including developmental abnormalities, inflammatory lesions, epithelial and stromal proliferations and neoplasms.^[1,5] Benign Breast lesion deserves attention because of their high incidence, their impact on women's life and due to cancerous potential of some histological types.^[5] Virtually every woman with a Breast lump, breast pain or discharge from nipple fears that she has breast-cancer.^[6]

This study done with aim to identified the burden and spectrum of benign breast lesions in Ajmer region, and evaluate their association with common findings and also compare the study with other studies done in India and abroad.

MATERIAL AND METHODS

This study is a prospective cross-sectional study of benign breast lesions in department of Pathology, Jawaharlal Nehru (JLN) Medical College, Ajmer Rajasthan over a period of two year from August 2016 to July 2018.

Got approval from institutional ethical committee (IEC) and informed consent was obtained.

Study materials were specimens of/from breast (Tru cut biopsy, lumpectomy, simple mastectomy and modified radical mastectomy specimens) received during the study period.

Specimens of breast cases which were diagnosed histo-pathologically as benign lesion included in study.

Table-1: Distribution pattern of the cases according to number of cases and age

S. No.	Benign Breast Lesion including Congenital and Inflammatory Lesions	No. of cases (with %)	Mean Age ± Std. Deviation (Years)	Minimum age (yrs.)	Maximum age (yrs.)
1	Fibroadenoma	309(67.03%)	26.09±8.715	13	59
2	Fibrocystic changes	52(11.28%)	37.12±10.147	20	60
3	Fibro adenosis	18(3.90%)	28.56±12.743	15	65
4	Chronic Mastitis	13(2.82%)	35.92±11.92	20	61
5	Duct Ectasia	9(1.95%)	42.11±13.09	30	70
6	Antibioma	9(1.95%)	34.78±10.171	24	53
7	Gynecomastia	8(1.74%)	29.75±16.998	17	60
8	Breast Abscess	7(1.52%)	39.57±14.164	28	70

Specimens other than breast, specimen of breast before and after the study period and diagnosed malignant breast lesions were excluded from study.

When receiving the specimen, detail history, clinical diagnosis, and type of surgery with operative findings were recorded. The tissues were routinely processed for histopathological examination and were stained by Hematoxylin and Eosin (H&E).

Statistical analysis has been carried using computer software statistical package for social science (SPSS) version 20. The qualitative data were expressed in proportion and percentages, and the quantitative data expressed as mean and standard deviations.

RESULTS:-

During the study period of two years, total 13023 specimens were received in the department of Pathology, out of these 620 (4.76%) specimen were from breasts that includes 61 biopsies, 457 lumpectomy and 102 mastectomy (simple and modified radicle) specimens. The specimen received from breast cases range from 13 years to 92 years of age with mean age was 35.17±15.390 years.

Out of 620 cases 461 cases (74.35%) diagnosed benign breast lesion. Males had 9 cases (1.95%) while females were an overwhelming majority at 452 cases (98.05%). All the male lesions were benign and spread between gynecomastia with a frequency of 8 or 1.74%, and 1 lipoma cases. The distribution of these benign breast lesions by mean age at diagnosis is presented in Table 1. The mean age of benign lesions were 29.07±10.767 years with age range between 13-70 years. Fibroadenoma was most common benign lesion (67.03%) followed by fibrocystic disease (11.28%). The 21-30 age group accounted for most of the benign lesions (40.13%) as seen in Table 2.

9	Granulomatous Mastitis	6(1.30%)	30.17±6.646	22	38
10	Lactating Adenoma	5(1.08%)	26.6±2.881	23	30
11	Atypical Ductal Hyperplasia	3(0.65%)	42.67±21.127	23	65
12	Phyllodes tumour	3(0.65%)	35±9.539	24	41
13	Accessory Breast	3(0.65%)	27±2.646	25	30
14	Atypical Lobular Hyperplasia	2(0.43%)	40.5±2.121	39	42
15	Intraductal Papilloma	2(0.43%)	42.5±3.536	40	45
16	Tubular Adenoma	2(0.43%)	23±1.414	22	24
17	Galactocele	2(0.43%)	52.5±17.678	40	65
19	Lipoma	2(0.43%)	35.5± 14.5	21	50
18	Fat Necrosis	1(0.22%)	50±0	50	50
20	Sclerosing Adenoma	1(0.22%)	34±0	34	34
21	Benign Breast Disease (unclassified)	4(0.87%)	30.5±7.141	20	35
Total		461(100.00%)	29.07±10.767	13	70

Table-2: Distribution pattern of the cases according to number of cases with age range

S. No.	Age (Years)	Female cases	male cases	Number of Cases	Percentage (%)
1	0 - 10	-	-	-	0%
2	11 - 20	110	3	113	24.51%
3	21 - 30	181	4	185	40.13%
4	31 - 40	104	-	104	22.56%
5	41 - 50	44	-	44	9.54%
6	51 - 60	7	2	9	1.95%
7	> 60	6	-	6	1.30%
Total		452	9	461	100.00%

Clinical and histopathological correlation: The clinical diagnosed pathological sample of the breast lesion were confirmed histologically. The accuracy of the clinical diagnosis of fibroadenoma was 93.9% (290 out of 309 cases). The clinical diagnoses of the fibrocystic changes were made in 52 cases and 36(69.23%) of them were correct. On the whole, the clinical diagnosis was correct in (91.18%) 424 out of the 465 patients with clinical benign breast lesion. 5 case of clinical benign came malignant and 1 clinical malignant lesion on tru cut biopsy diagnosed benign as fibrocystic changes.

DISCUSSION:

Benign breast diseases encompass a wide range of lesions including inflammatory, neoplastic, and aberrant hormonal response disorders. Breast lesions are detected very commonly now days, due to awareness, knowledge, and most importantly self-examination done by patients.

Present study is a cross section study of benign breast lesions for a duration of 2 years in the department of Pathology. Here, we were discussing and comparing important features of the breast lesion with the other similar studies.

- Incidence of Lesions:** In this study, out of total 620 cases of breast lesions, majority of lesions were benign (461 cases, 74.35%) rest less common case were malignant lesions (159 cases, 25.65%). Similar results were observed in almost all study that the benign lesion were more prevalent like study of Anyikam et al^[1] (68.8%), Ali K. Ageep^[2] (82.29%), Deepika Hemrajani et al^[4] (69.50%), Jayawant Mahadani et al^[5] (83.9%), SE Shirley et al^[7] (70.4%), Tarek tawfik et al^[8] (78.6%), Rasheed et al^[9] (77.77%), Uwaezuoke et al^[10] (68.3%), Kalyani et al^[11] (77.5%), Arunima Mukhopadhyay et al^[12] (71.9%), Kasturi chikhalikar et al^[13] (74%), Sheela N. Kulkarni et al^[14] (65.21%). Observation found in study differed slightly from other authors probably because of difference in sample size, duration and place of study.
- Sex distribution:** In our study Males had 9 cases (1.95%) while females were an overwhelming majority at 452 cases (98.05%). Similar result of low male participation was found in other study like Anyikam et al^[1] (2.35%), Sheela N. Kulkarni et al^[14] (2.22%), Stanley Uwaezuoke et al^[10] (4.8%), Abdulkader M. Albasri et al^[15] (3.2%), Pankaj et al^[16] (8.3%). Means benign lesion of breast mainly disease of females.
- Histopathological Typing:** In this study, the most common lesion was Fibroadenoma (67.03%) followed by fibrocystic disease (11.28%). Tarek tawfik et al^[8], kasturi chikhalikar et al^[13], Sheela N. Kulkarni et al^[14], Kalyani et al^[11], Arunima Mukhopadhyay et al^[12], Stanley Uwaezuoke et al^[10], Abdulkader M. Albasri et al^[15],

Pankaj et al^[16], and Anmod G. et al^[17], Phillipo I. Chalya et al^[18] also found similar findings in their study.

- Age Incidence:** In our study, 64.64% of benign lesions were found in the age group <30 years of age and similar results were obtained by Anyikam et al^[1] (62.33%), Ali Ageep et al^[2] (70.54%), Deepika Hemrajani et al^[4] (66.87%), Uwaezuoke et al^[10] (66.7%), Kasturi chikhalikar et al^[13] (74.99%), Sheela N. Kulkarni et al^[14] (60%), Phillipo I. Chalya et al^[18] (73.7%) of benign lesion in age group <30. Peak age group for benign lesions (40.13%) was 21-30 years of age that have almost similar to Anyikam et al^[1] (43.21%), Deepika Hemrajani et al^[4] (38.65%), Ali Ageep et al^[2] (45.15%), Mima. B. Sangma^[3] (45%), Stanley Uwaezuoke et al^[10] (43%), Abdulkader M. Albasri et al^[15] (38.64%), Phillipo I. Chalya et al^[18] (67.1) studies. Means benign lesion of breast mainly occurs in young age.
- laterality:** In this study, Unilateral involvement was more common when compared to bilateral involvement. Bilateral involvement seen only (4.34%) of benign lesions. In unilateral cases right breast (49.67%) was more involved than the left breast and this result were similar to study of Sheela N. Kulkarni et al^[14] (51.11%), Mima. B. Sangma^[3] (48%). But opposite then Pankaj et al^[16] study where left was more common.
- Presenting complaint:** In our study, painless breast lump was the most common presenting complaint in benign lesion that have 412 patients out of 452 all benign lesion (89.37%), followed by breast lump with pain (8.19%). These findings were similar respectively with the study of Mima. B. Sangma^[3] (63% and 20%), Sheela N. Kulkarni et al^[14] (76.66% and 20%), Pankaj et al^[16] (60% and 19.17%), SE Shirley et al^[7] (67.8%). Phillipo I. Chalya et al^[18] (67.6% and 14.6%).
- Site Incidence:** The most common site of the benign lesion in breast was lower inner quadrant with 27.55% of the cases. Next common is lower outer quadrant with 21.69%. this is opposite the study of Sheela N. Kulkarni et al^[14] and Mallikarjun et al^[19], Pankaj et al^[16] where upper outer quadrant was most common site.

CONCLUSIONS

Majority of cases presenting with breast problems diagnosed to have benign lesions. The benign breast lesions overwhelm presented in young women. The fibroadenoma are the most common ones and peak in 21-30 years age group. Painless lump was most common complain. So, young age women could be assured that breast complains affecting them are mostly related to benign conditions that could be managed effectively and occasionally may need proper follow up especially those of precancerous tendency.

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